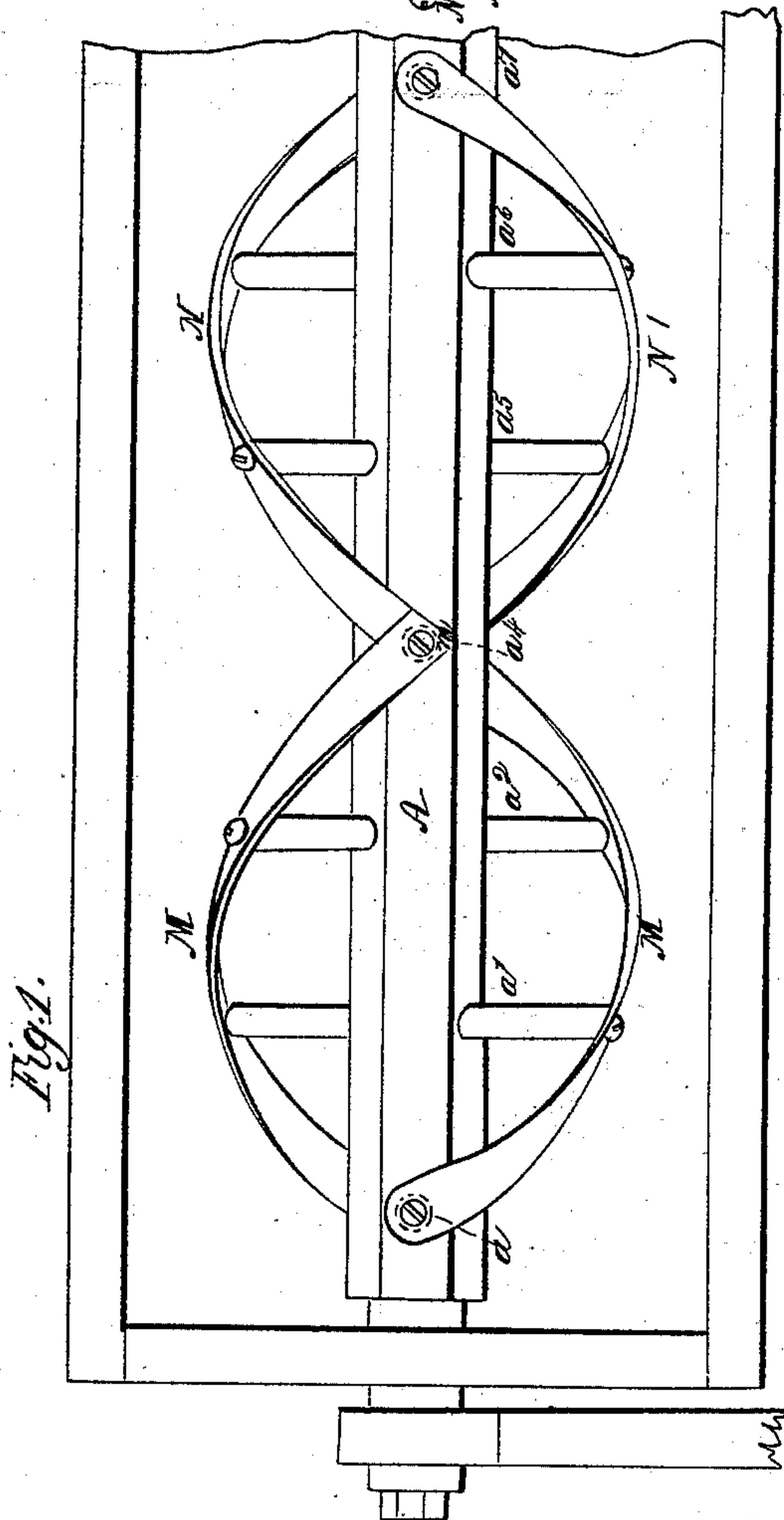
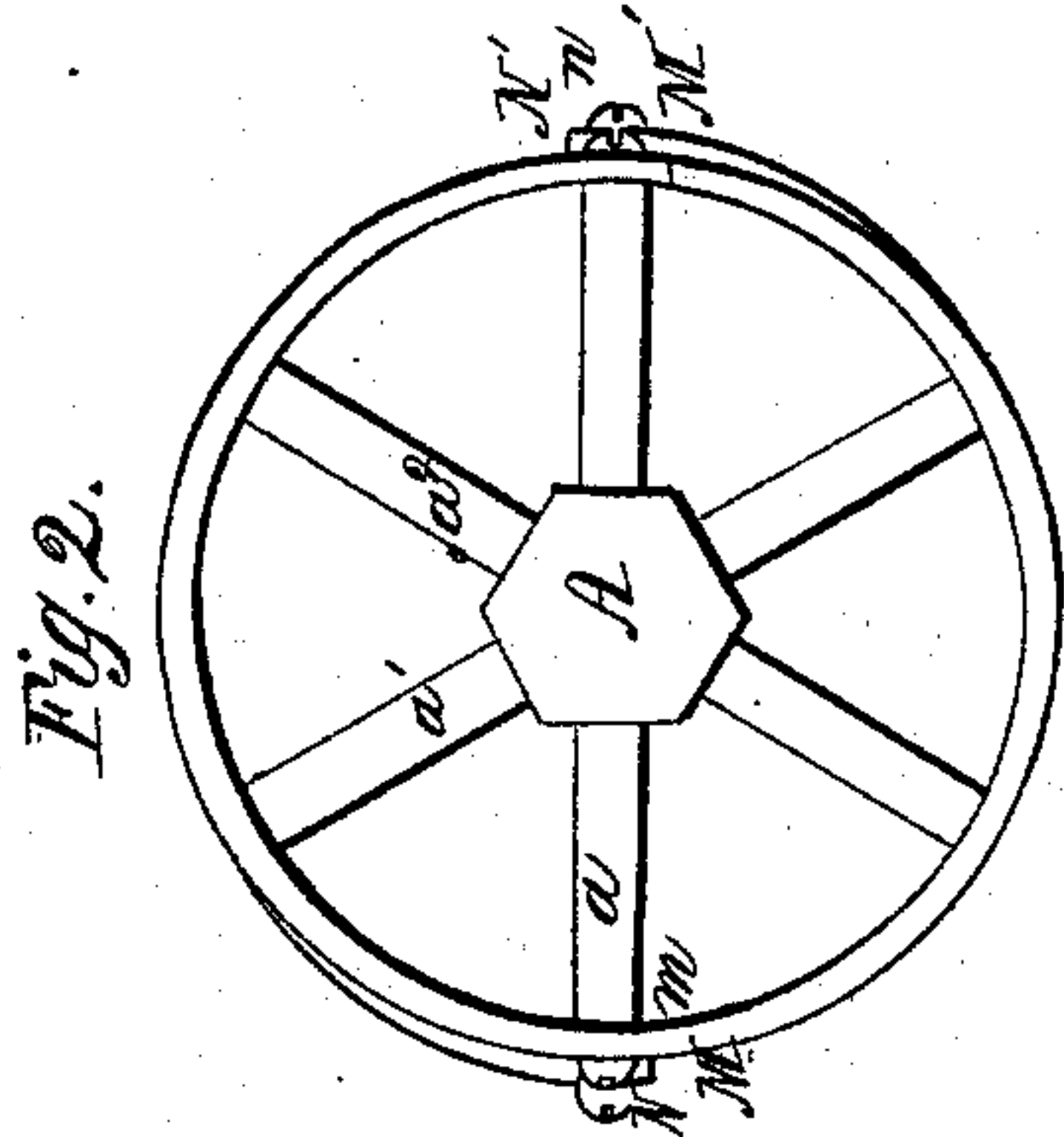


J. D. KELLOGG, Jr.

Churn.

No. 78 749,

Patented June 9, 1868.



Witnesses;

J. C. Keaton
B. A. Pettit

Inventor;

J. Dwight Kellogg Jr.
By J. H. Keaton
Attorney.

United States Patent Office.

J. DWIGHT KELLOGG, JR., OF NORTHAMPTON, MASSACHUSETTS.

Letters Patent No. 78,749, dated June 9, 1868.

IMPROVEMENT IN CHURN-DASHER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. DWIGHT KELLOGG, Jr., of Northampton, in the county of Hampshire, and State of Massachusetts, have invented a new and improved Churn-Dasher; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 is a top view.

Figure 2 is an end view.

This invention relates to a new and improved form of churn-dasher, by which the butter can be more quickly and easily made and gathered than in any hitherto in use, it being only necessary to rotate the dasher in one direction to make the butter, and in the reverse direction to gather it.

In the drawings, A represents the shaft of the dasher, which, lying in a horizontal position, is so supported and connected with a crank or gear-wheels outside of the churn, that it can be rotated easily in either direction. This dasher is formed by attaching to this shaft several arms, a a^1 a^2 , &c., each extending through the shaft, and projecting from opposite sides of it, and the several arms being arranged in a spiral manner around the shaft from end to end; and fastening on the ends of these arms are four narrow flat strips, M M' N N', the two strips M M' running at right angles to each other, from the end arm, a , to the centre arm a^4 , and the two other strips, N N', running in the same manner from the centre arm, a^4 , to the other end arm, a^7 .

It will be observed that when the strips are attached and arranged in this manner, all four of them are, at their inner end, supported by the central arm a^4 , and care must be taken so to arrange them that the two which are attached to the same end of the arm a^4 , meet these at right angles, forming a sharp point or angle, m , or n . The strips are fastened to the extreme ends of the arms, so as to present their edges to the cream as they are forced through it.

The operation of this improved dasher is as follows: In turning it in the direction indicated by the arrows, the angles m n will cut the cream in the middle of the churn, separating it into two portions, and generating a current towards either end of the dasher. The spiral arrangement of the arms a a^1 a^2 , &c., will greatly assist in this operation, forming a sort of double screw, which forces the currents from the centre. Meanwhile the sharp, thin strips, which are supported by the arms, cut easily through the cream, tending, in some degree, to increase the current, but principally to operate as a beater. The arms a a^1 a^2 , &c., while tending to generate and maintain the current from the centre, do not operate thus exclusively, but in the main serve as beaters. The joint operation of the rims or strips M M' N N' and arms a a^1 a^2 , &c., is, therefore, to induce and support a moderate current outward from the centre, and at the same time, if the shaft is turned rapidly, to beat the cream thoroughly, and make the butter in a very short time, three minutes being all that is necessary for this purpose in the practical operation of the device.

As soon as the butter appears in the milk in sufficient quantities to show that it is thoroughly churned, the motion of the shaft is reversed, which reverses the current, throwing it towards the centre, and, if the dasher is turned more slowly, "gathering" the butter rapidly and thoroughly from the milk.

The whole operation of the dasher is exceedingly effective, and its simplicity of construction is such that it can be made at slight expense, and applied to any churn which will admit of a horizontal dasher.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A churn-dasher, constructed with spiral rows of arms, a a^1 a^2 , &c., and strips, M M' N N', attached to the arms, and arranged in combination with each other and with the shaft A and the rows of arms, in the manner described, and for the purposes specified.

Witnesses:

FRED'K W. LYMAN,

A. PERRY PECK.

J. DWIGHT KELLOGG, JR.